

C. To achieve this jitter the following trigger arrangements must be provided.

(a) Grid drive.

D.C. bias 100 volts negative,
Min. trigger pulse 500 volts
Rate of rise of grid drive to be between 2000 and 4000 volts/usec.
Trigger pulse duration : usec. to 3 usec.
Source impedance of pulse generator 250 to 500 ohms.
Max. D.C. resistance grid to cathode. 2000 ohms.

(b) Baffle drive.

As grid drive but with zero bias, and preceding the grid trigger pulse by 1.0 ± 0.25 us.

The jitter may be sensibly reduced by increasing the grid and baffle drive to 1000 volts.

A simpler method of triggering which results in increased jitter (of approx. 0.2 usec) is shown in Fig. 2.

D. The supporting clamp must be insulated from earth.

To be performed in addition to those applicable in K1001

	Test Conditions			Test	Limits		No. Tested	Notes
	Vf volts	Vr volts	Va kV		Min.	Max.		
a	2.5	2.5		If (A)	36	44	100%	1
b	2.5	2.5	Raise to 18	HT. Run up time (mins)		1	100%	2.3.
c	2.5	2.5	18	Operational test. Time of trip-free operation (mins)	10		100%	2.4. 9.
d	2.7	2.7	18	Operational test. Time of trip-free operation (mins)	5		100%	2.5. 9.
e	2.3	2.3	18	Rate of rise (A/us)	4000		100%	2.6. 9.
f	2.5	2.5	18	Jitter (usecs)		.03	100%	2.7. 8.9.
g	2.5	2.5	18	Life (hours)	2000		TA	2.10.

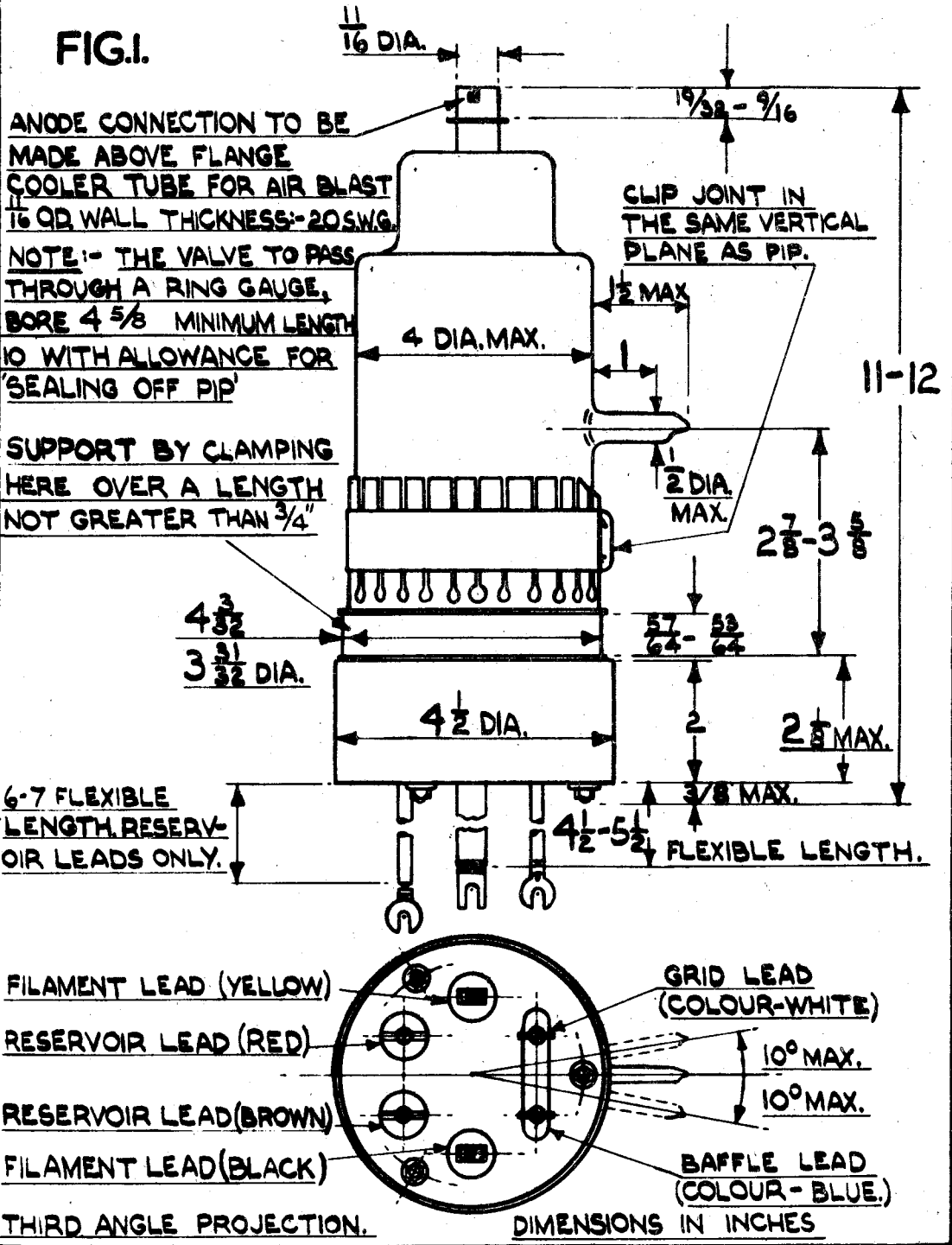
NOTE

1. The filament voltage should be measured at the tag end of the cathode leads after 10 minutes heating time.
2. The valve must be tested in the circuit shown in Fig. 3.
3. This test to be made after a cathode and reservoir heating time of four minutes.
4. This test to immediately follow test (b).
5. This test to immediately follow test (c).
6. The filament voltage to be reduced immediately after test (d) and the rate of rise to be measured five minutes thereafter.

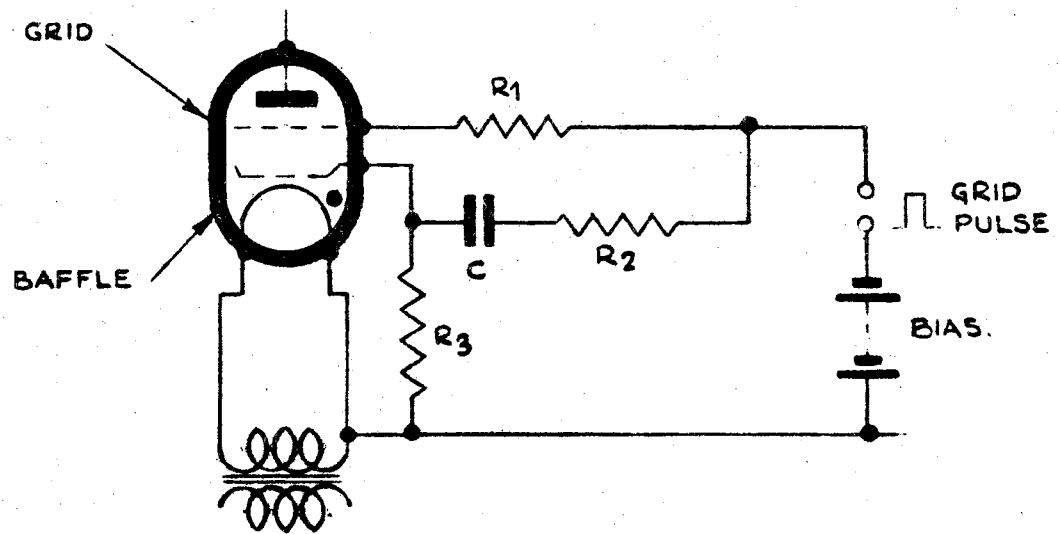
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7. This test to be made at least fifteen minutes after reaching full H.T.
8. The jitter to be measured under conditions specified in note C. The frequency of the filament supply shall be between 45 and 60 cycles/sec.
9. In tests (c), (d), (e) and (f) together a total of one trip is permitted. A trip shall be deemed to have occurred if the valve loses control for a period longer than 0.1 sec.
10. The valve shall be considered to have reached the end of life when, under the conditions of test (d) or (e) it trips four or more times in a period of five hours, or catastrophically fails.

FIG. I.



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$$C = 0.005 \mu F$$

$$R_1 = R_2 = R_3 = 500 \Omega$$

GRID PULSE AS DEFINED IN NOTE C SECTION (a)

FIG 2
GRID AND BAFFLE TRIGGERING CIRCUIT

